
BISOL
Solar company!
Colour your
LIFE!
BISOL Spectrum
www. bisol. com

RED glass is a good choice for most European roofs, where the panels will be almost invisible, especially if the building is under cultural heritage protection.

Deep **RED**

Coloured Glass

BISOL Spectrum

With respect for our natural surroundings and the architectural legacy in mind, we are introducing exclusive **BISOL Spectrum** photovoltaic modules with coloured glass, whereby you no longer have to compromise aesthetics for efficiency when harnessing the endless power of the sun.

BISOL Spectrum modules were designed not only to conform, but also to refine the architectural traits of buildings and roofs of various types and styles. Available in a wide palette of colours, BISOL Spectrum PV modules can now really become an integral part of the building by either seamlessly blending into the historic character of the building in its natural setting, or by contributing to the manifestation of the building's modern design features. Their unique look allows discreet blending with the scenery, hence preserving the timeless beauty of diverse natural settings. Either way, BISOL Spectrum modules will undoubtedly add a timeless aesthetical value.

Advantages:

- Made in EU
- Available in variety of colours
- A perfect colour match to your roof
- On-roof or BIPV
- PID free
- Module presorting for higher profitability
- Exellent low light performance
- Double insulation

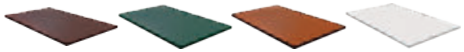
Deep Red

ORANGE glass matches the shades of Dutch buildings and brick roofs all around the world, and maintains the colour recognition of the environment.

Terracotta **ORANGE**

Coloured Glass

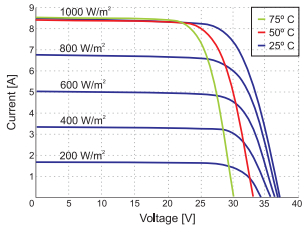
Electrical Specifications @ STC (AM1.5, 1,000 W/m², 25 °C)



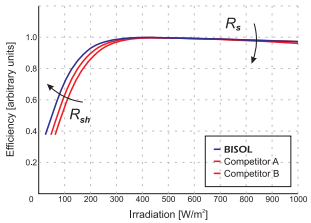
		Deep Red	Forest Green	Terracotta Orange	Alabaster White
Module Type	BDO	320	300	280	220
Nominal Power	P_{MPP} [W]	320	300	280	220
Short Circuit Current	I_{SC} [A]	9.55	9.30	8.30	6.55
Open Circuit Voltage	V_{OC} [V]	41.5	41.1	43.2	40.9
MPP Current	I_{MPP} [A]	9.10	8.70	7.55	6.20
MPP Voltage	V_{MPP} [V]	35.2	34.5	37.1	35.5
Power Output Tolerance		±3 %			
Maximum Reverse Current		18 A			
Maximum System Voltage		1,500 V (Application Class A)			

Power classes vary depending on colour. I Efficiency at irradiation 200 W/m²: 99.3 % of STC efficiency or higher. I Power measurement tolerance: ±3 %.

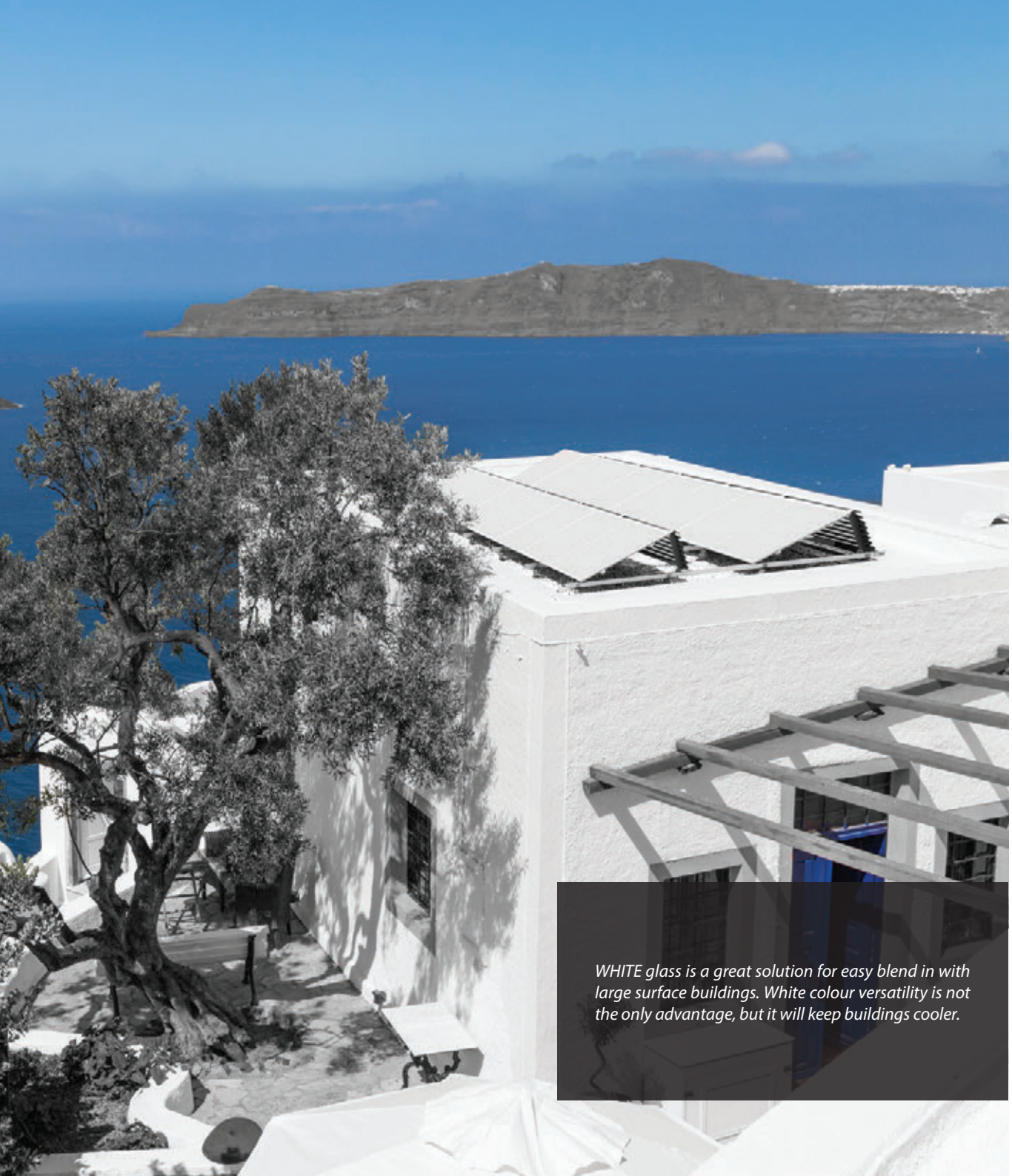
I-V Curve



Effective Efficiency



Terracotta Orange



Alabaster WHITE

Coloured Glass

Thermal Specifications

Current Temperature Coefficient	α	+ 0.06 %/ °C
Voltage Temperature Coefficient	β	- 0.27 %/°C
Power Temperature Coefficient	γ	- 0.35 %/°C
NOCT		44 ± 2 °C
Temperature range		- 40 °C to + 85 °C

In compliance with:

IEC 61730 Ed.1 61215 Ed.2 · IEC 62804-1 · IEC 61701 Salt water mist resistance · IEC 62716 Ammonia resistance · AS5033 compliant · European Recycling Platform · ISTITUTO GIORDANO · certisolis CRE4 · HW3 · CE · SGS · SGS · SGS · MCS · TÜV · AIT AUSTRIAN INSTITUTE OF TECHNOLOGY

Certificates available upon special request. Additional charges may apply.

WHITE glass is a great solution for easy blend in with large surface buildings. White colour versatility is not the only advantage, but it will keep buildings cooler.

Alabaster White

GREEN glass goes well with the natural environment and is the greenest solution for the planet.

Forest **GREEN**

Coloured Glass

Colour Availability

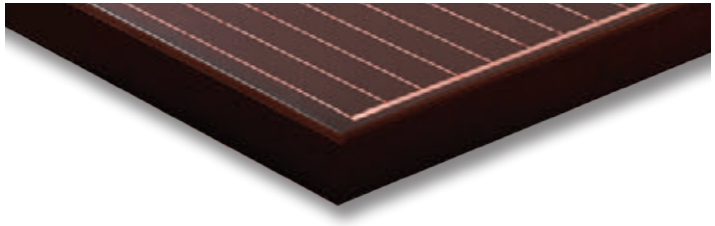
Spectrum PV module	Frames, BIPV Flashings, Middle and End Clamps	Solar Glass
Deep Red	RAL 8017	RAL 8015
Forest Green	RAL 6009	RAL 6007
Terracotta Orange	RAL 8004	RAL 8023
Alabaster White	RAL 9016	RAL 9016

The actual colour shades may vary from the images shown. Colour inconsistencies in a module may appear due to the nature of this product.

Forest Green

Roofs represent 20-25% of the total urban area and with photovoltaics, they present an opportunity for sustainable building designs.

On-Roof Solution

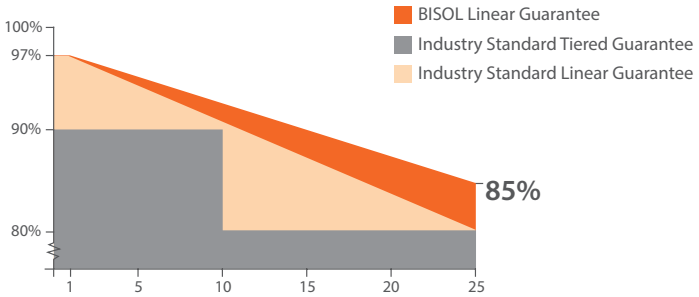


Detail of standard frame

Guarantees:

15 — Product guarantee
15 years

25 — Linear guarantee
85% output in 25th year

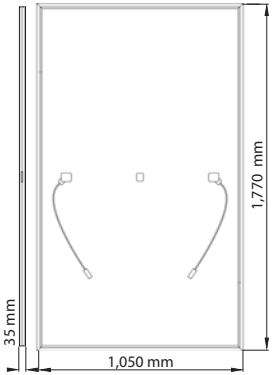


Solar energy produces no pollution, has no environmental effects and is ecologically acceptable.

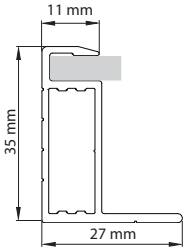
Mechanical Specifications

Length x Width x Thickness	BDO: 1,770 x 1,050 x 35 mm BSO: 1,813 mm x 1,075 mm x 25 mm
Weight	BDO: 20.5 kg / BSO: 21 kg
Solar Cells	120 Half-Cut mono c-Si / 166 mm x 166 mm
Junction Box / Connectors / IP	Three bypass diodes / MC4 compatible / IP 68
Cable Lenght	Default: 1,200 mm On demand (for portrait orientation): 300 mm
Frame	Standard frame (anodized AL with drainage holes and rigid anchored corners) or BIPV (Solrif®)
Frame Colour	Any RAL colour code, black or silver
Back Sheet Colour	Black
Glass	3.2 mm glass with anti-reflective coating / tempered / high-transparency / low-iron content
Packaging	BDO: 30 modules per pallet / stackable 3 pallets high BSO: 24 modules per pallet / stackable 2 pallets high
Impact resistance	Hailstone / Φ 25 mm / 83 km/h (51 mph)

Dimensions



BISOL Spectrum module BDO
with standard frame

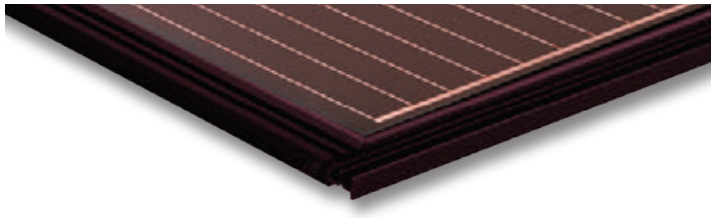


Cross section of standard frame

BIPV removes any distinction between energy systems and building materials. It is aesthetic, multi-functional, eco-friendly, and signals a step into the future.

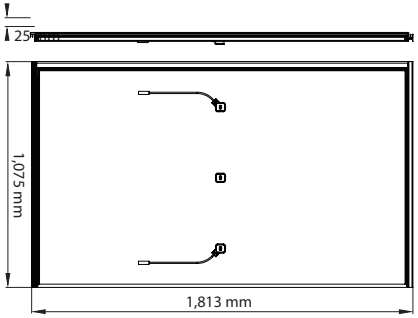
Roof-Integrated Solution

BISOL Spectrum PV modules are also available as a BIPV solution used in roof-integrated applications, that can be more cost effective simply because their composition and location replaces a number of conventional components. The overlapping of the specially framed BIPV modules produces an elegant PV array that completely replaces the conventional roofing. Maximum visual conformity and an unobtrusive appearance of the PV system are achieved by fully matching the colour of the end flashings, making it especially appealing to the eye. Coloured PV modules teamed up with building-integrated trim allow the PV system to fully blend in with even the most particular roof types, offering new possibilities of applying photovoltaic to most delicate historic and listed buildings in conservation areas.

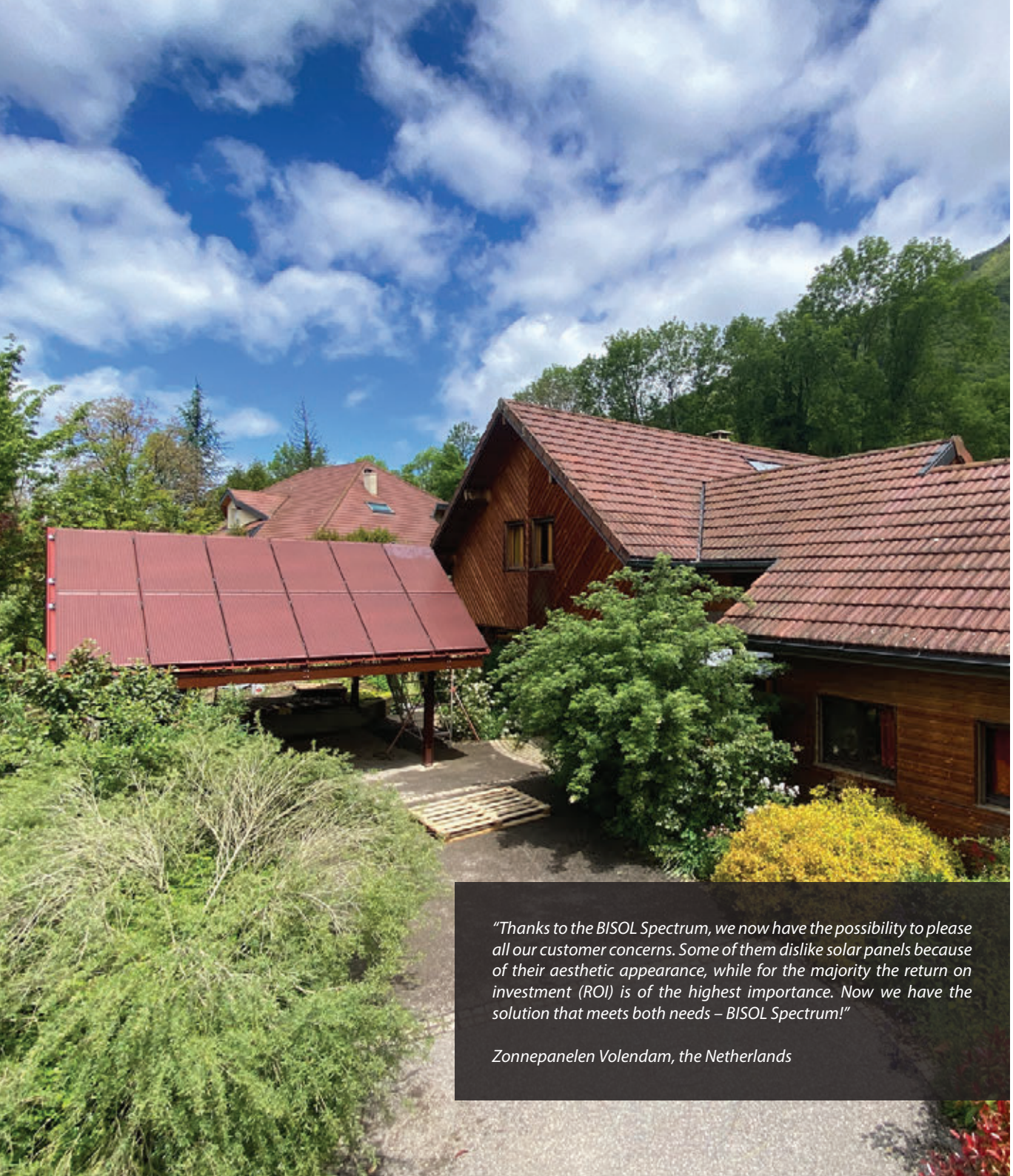


Detail of special BIPV (Solrif®) frame

Dimensions



BISOL Spectrum module with BIPV frame



"Thanks to the BISOL Spectrum, we now have the possibility to please all our customer concerns. Some of them dislike solar panels because of their aesthetic appearance, while for the majority the return on investment (ROI) is of the highest importance. Now we have the solution that meets both needs – BISOL Spectrum!"

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Dealer information

Tolerances of values are ± 5 %. Unspecified product properties remain under full discretion of BISOL.

Additional terms & conditions apply. Please see Standard Limited Guarantee and General Terms and Conditions.